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Quantifying the Shift in Retail Transaction Dynamics Through Digital Financial Technology: An Empirical Impact Assessment of GCash Adoption on Physical Cash Flow, Transaction Efficiency, and Consumer Payment Behavior Among Sari-Sari Stores and Local Retail Establishments in the Philippines

Jessa Mae Antero[1], Kaiz Baron[2], Leonardo G. Bugtong[3], John Michael I. Calimpong[4], Mariella O. Dapin[5], Rose Marie S. Espiritu[6], James Lloyd T. Handumon[7], Maxel Mae B. Lapera[8], Jericho B. Maghinay[9], Jessa B. Mona[10], Brixie Lyca D. Naquira[11], Jeniel V. Pacilan[12], Trixie Sugalam[13*] & Ginbert A. Fernandez[14]

[1-14]Department of Information Technology, College of Information Technology and Computing, University of Science and Technology of Southern Philippines – Oroquieta Campus, Oroquieta City, Misamis Occidental 7207, Philippines.
Corresponding Author (Trixie Sugalam) Email: trixie.sugalam@7.ustp.edu.ph[*]

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ABSTRACT

Digital payment systems have become more common in the Philippines, especially through the use of mobile wallets like GCash. A lot of sari-sari stores and small retail enterprises are now using GCash because it is faster and more comfortable for both the buyer and the merchant. This study aimed to determine the effects of GCash to cash transactions, transaction efficiency and payment behavior in local retail outlets. The researchers utilized a quantitative descriptive design and obtained the data from 1,000 respondents which are customers and sari-sari store proprietors. The data were gathered by survey questions via Google Forms and evaluated through the use of weighted mean and t-test. The results showed that most customers found GCash beneficial, convenient and efficient in transactions. Sellers too had excellent experiences, especially with payment flexibility, speedier transactions and easier record-keeping. The results, overall, imply that GCash has a favorable impact on retail transaction behaviors and possibly reduces the need on real currency. Statistical study further demonstrated a significant correlation between GCash usage and cash transaction behavior. In conclusion, the study shows the importance of digital payment methods in the ongoing digitalization of retail transactions in local communities.

Keywords: Gcash; Digital Payment Systems; Mobile Wallet Adoption; Cashless Transactions; Financial Technology; Retail Establishments; Consumer Payment Behavior; Transaction Efficiency; QR Code Payments; Digital Financial Services; Sari-Sari Stores; Philippine Retail Industry.

1.0. Introduction

The last few years have brought significant changes to how retail customers make their payments at stores. Digital payment methods now enable many consumers to stop using cash because those methods have become both more accessible and accepted in various locations. The Philippines' top mobile wallet, GCash, enables users to make payments through their mobile devices by using QR codes and online transfers and other digital functions. Customers at supermarkets and convenience stores and small retail stores prefer GCash as their payment method because it gives them straightforward payment accessibility. According to the Bangko Sentral ng Pilipinas, digital payments account for a significant share of retail sales throughout the country as of 2024. The findings suggest that cashless payment methods may become standard practice for everyday financial transactions. After businesses start using digital payment systems like GCash their cash usage decreases. Retailers need to change their operational methods which include cash management and transaction processing because their practices must adapt to new consumer behavior patterns. Retail businesses fail to comprehend GCash usage because they cannot link it to their cash transaction operations according to their current understanding of the technology. Some storefronts still require cash payments while other storefronts proceed to install digital payment methods. Customer preferences for GCash over cash depend on internet connectivity and system reliability and their knowledge of the

system. Researchers will investigate whether businesses stop using cash for retail transactions because of the increasing adoption of GCash. E-wallet adoption studies used convenience and system performance as evaluation criteria while user security assessment served as their testing method according to the current research findings. Mobile wallet adoption research shows that users choose digital payments when they find payment methods to be both beneficial and easy to use. Existing studies explain why people choose e-wallets but they lack research about e-wallets effects on cash transactions at retail stores. The study requires businesses to investigate how digital payments influence their customer relationships and internal processes. Digital payment systems have expanded to more locations which leads to changing customer habits and retail business practices. According to a report by the Bangko Sentral ng Pilipinas the QR Ph initiative provides QR-based payment systems to small and medium-sized enterprises which use them for cashless transactions. The new payment system enables retail establishments to maintain their cash payment system while they add additional payment options. Cashless payment systems provide businesses with operational advantages because they enable quicker transactions while decreasing their operational expenses. Digital payment methods enable businesses to achieve faster transaction speeds while reducing their cash handling requirements according to a study published in the MDPI journal Sustainability. Digital payment systems achieve optimal performance when two conditions are present: their infrastructure needs to be operational and people require internet access while using the system. GCash has become increasingly popular among Filipinos who are adopting digital financial services. The BSP report shows that people now prefer cashless payment methods which provide them with easier access to their needs as of 2024. As it takes more time to convert into cashless payment systems, retail enterprises still employ cash together with digital payment options. Researchers said GCash usage data is important because it gives insight into how consumers spend money at retail outlets. Existing studies reveal that scientists have not collected sufficient evidence to prove the effect of e-wallets on cash transactions in offline establishments. Existing studies find that researchers analyze user intention rather than user transactional behavior. This study is to assess the effect of GCash usage on customer payment behavior and on retail transaction behavior. This study examines the effect of GCash usage on cash transaction management in retail industry. The study measures the influence of GCash usage on consumer behavior and store operating performance. The study measures if the use of GCash lessens cash payment transactions. The findings of the research study will help business owners to understand how digital payment methods work in modern retail settings.

There is a growing body of literature on digital payment systems and mobile wallet acceptance, but relatively few studies have examined the impact of GCash usage on the physical cash flow and transaction behavior of sari-sari stores and local retail enterprises in the Philippine context. Most previous studies focused primarily on consumer intention and technology acceptance, while limited attention has been given to the operational implications of GCash adoption on retail cash transactions and seller experiences.

1.1. Objectives of the Study

General Objective

1. To determine the impact of GCash usage on cash transactions in retail establishments.

Specific Objectives

1) To identify the level of GCash usage among customers in selected retail establishments.
2) To examine whether GCash usage reduces the frequency of cash payments.
3) To evaluate the efficiency of transactions when using GCash compared to cash.
4) To determine the factors influencing customer preference between GCash and cash payments.
5) To examine seller perceptions regarding digital payment adoption.
6) To determine whether GCash significantly affects retail transaction behavior.

1.2. Statement of the Problem

This study aims to assess the impact of GCash usage on cash transactions in retail establishments in the Philippines. Specifically, it seeks to answer the following questions:

1. What is the level of GCash usage among customers in retail establishments?
2. Does the use of GCash significantly reduce the number of cash transactions?
3. How does GCash usage affect transaction efficiency in retail stores?
4. What factors influence customers' preference between GCash and cash payments?

1.3. Hypotheses of the Study

H_0 (Null Hypothesis): There is no significant difference between GCash usage and cash transactions in retail establishments.

H_1 (Alternative Hypothesis): There is a significant difference between GCash usage and cash transactions in retail establishments.

1.4. Significance of the Study

This study may provide valuable information and practical insights to the following groups:

- Retail Store Owners

The research findings reveal to retail store owners the effect of GCash digital payment systems to their business operations. The technology allows businesses to conduct transactions faster, while reducing the hazards associated with handling cash and increasing consumer satisfaction.

- Consumers

Customers with information about GCash benefits and disadvantages when compared with cash payments. The study helps customers choose their payment method by providing information about convenience and efficiency and accessibility.

- Business Sector

The study results show small and medium businesses the need to start using digital payment systems. The study results demonstrate that businesses need to adopt new payment methods in order to compete successfully in digital markets which keep changing.

- Future Researchers

The study provides a research basis for future studies which will examine digital payment systems and mobile wallets and their impact on customer behavior. The study will enable researchers to investigate how cashless payment systems affect customers throughout their purchasing journey.

1.5. Scope and Limitations of the Study

This study focuses on assessing the impact of GCash usage on cash transactions in sari-sari stores in the Philippines. This includes customers and sari-sari business owners experienced with utilizing GCash and cash as a payment method. The study focuses on the consumer perception, seller perception and the overall influence of the use of GCash on transaction efficiency and payment behavior. The data were obtained from a total of 1,000 respondents, comprising 800 buyers and 200 sellers. The study used a survey questionnaire with a five-point Likert scale and the results were analyzed using descriptive statistics like mean and inferential statistics such as t-test. However, the study is limited to selected respondents and may not represent all retail establishments in the Philippines. The responses are based on self-reported data, which may be subject to bias. Additionally, the study focuses only on GCash as a digital payment platform and does not include other mobile wallets or financial applications. External factors such as internet connectivity, system reliability, and economic conditions were not fully considered in this study.

1.6. Definition of Terms

- GCash

GCash is one of the most popular mobile wallet applications that serves the Philippines. This mobile application allows consumers to use their cell phones to perform the following transactions: send and receive money, pay bills, buy products or services, and pay in shops using QR codes. GCash is a convenient channel to avoid handling cash and traditional banks.

- **Cash Transactions**

Cash transactions-paying by way of genuine currency, used as a medium of exchange in the form of coins and paper bills. This payment method has been hard used throughout, and especially in regions where cash payment is prevalent on the high street. Cash transactions necessarily involve the hand-to-hand transfer of currency, and are typically associated with manual handling, with the setting of change aside.

- **Retail Establishments**

There are businesses that retails products and goods to consumers for personal use. The retail organization can be called as supermarkets, sari-sari stores, convenience stores, pharmacy or it could be a large or small retail outlets. The retail outlets are the last in the “distribution channel”, if the customers buy the retail product through cash payment or digital payment like mobile wallet.

- **Digital Payment**

Digital payment means all those digital transactions which are done without carrying paper cash with you. Payments made by mobile wallet, net banking, credit card, debit card, QR code are all digital payments. Digital payments are done because they are easy and fast to use, and you can make the transactions anytime and anywhere.

- **Transaction Efficiency**

Transaction efficiency is a measure of the time and ease with which a sale is consummated at a retail level. Elements are contributing to transaction efficiency include the time taken to process the sale, availability, accuracy and satisfaction to both the customer and the seller. The more efficient the system, the less the delays and mistakes.

2.0. Literature Review

Digital payment systems in the Philippines developed rapidly because of ongoing financial technology system development projects which were implemented throughout the country. The Bangko Sentral ng Pilipinas (2024) reports that digital retail payments made up more than 57% of total retail payments throughout the country. The government achieved its cash-lite economy initiative success through its implementation of electronic payment system adoption policies. Filipinos started using mobile wallets and electronic payment systems which resulted in the development of fresh spending habits.

The Bangko Sentral ng Pilipinas (2023) reported that QR Ph implementation allows merchants and consumers to conduct mobile wallet digital transactions which resulted in significant growth for QR-based payment systems. Increasing QR payment usage has led to businesses which include small retail shops starting to use digital payment systems for their everyday business activities.

The research findings have been proven through evidence which regional studies provide. Digital financial technologies function as essential tools which enable Southeast Asian countries to achieve their financial inclusion targets according to the Asian Development Bank (2023). The mobile payment systems enable users without traditional banking access to engage in digital financial operations.

As per World Bank (2022) digital payment systems encourage economic involvement as they allow individuals and small firms to conduct financial transactions utilizing mobile devices. Digital banking services are essential sources to micro-entrepreneurs who own sari-sari stores. According to Visa's (2023) research findings, Filipino customers are moving to digital payments because they like the convenience and security that these systems offer. People use mobile wallets as payment methods which they need for their everyday activities that include retail shopping and transportation and bill settlement.

Mobile wallets now represent the most common digital financial technology used by people in the Philippines. GCash users can perform various financial tasks through their platform which enables them to send money and pay bills and make payments to merchants by using QR codes. The researchers Belmonte et al. (2024) discovered that Filipino consumers will adopt mobile wallets when they perceive digital payment systems as practical and simple to operate and secure to use. Research findings show that people will use mobile wallets when they see those

wallets as secure and useful technology. Research findings suggest that people will utilize e-wallets if they believe those systems may deliver practical value.

Alcain (2024) research revealed that the users' awareness of technology and perception of the system's security affect the adoption of e-wallets. Digital payment users who believe in trustworthiness will manage their finances using the system. The study conducted by Tran Le Na et al. (2021) found that two factors which include perceived risk and usability serve as major elements which influence consumers to decide whether to adopt mobile wallets. Users who find mobile payment systems simple to operate will choose them as their preferred financial security solution.

Hopali et al. (2022) proved that mobile wallets enhance financial efficiency because they reduce the requirement for people to use physical cash. Digital payment systems enable customers to purchase items through quick transaction processing. Digital payment systems enable faster transaction processing because they eliminate the need to handle cash while they speed up payment processing. The studies have shown that consumer trust and convenience together with product usability work as key drivers which determine whether users will adopt mobile wallet solutions like GCash.

Small retail businesses function as vital components which support the economic development of emerging nations. Sari-sari stores are the principal shopping places for Philippine citizens for necessary household supplies. Jacob (2024) found that retail companies adopting digital payment systems achieve improved financial control and faster processing of transactions. The electronic payment system also allows store owners to keep tabs on their payment transactions with greater ease than they can using traditional cash handling methods. (2025) Maglinte did a study which showed that retailers who use QR-based payment systems had faster processing of payments and better organization of payments. The study established internet access and merchant understanding of digital payment systems as essential components which determine successful digital payment system implementation.

Numerous barriers exist which need resolution according to research findings on sari-sari store digitalization. The store owners encounter two main challenges because two groups require internet access while another group requires digital financial technology education. Small retail businesses encounter these challenges which block their ability to implement mobile payment systems. Store owners of small stores understand that digital payment systems provide them with different advantages even though they encounter various challenges. Mobile payment platforms give customers extra payment options while drawing in tech-savvy consumers who favor cashless payments.

Research on digital transformation of micro-enterprises has demonstrated that micro-enterprises using digital payment systems had higher levels of customer satisfaction and higher levels of transparency of financial transactions. The success of digital payment systems is based on client payment preferences that influence the method of payment. There are several researches that have studied the choice of cash and digital payment options.

Schomburgk, Belli and Hoffmann (2024) found that people who use cashless payment methods behave differently than cash users. Digital payment systems enable customers to complete their transactions more easily which results in quicker buying decisions. As Kumar et al. (2023) note, consumers' confidence and awareness of security

measures are the prerequisites for the adoption of mobile financial services. Users are more likely to use mobile wallet services if they believe their financial data is safe.

As stated by Jafri et al. (2024), trust and dependability are the most important factors for the adoption of financial technology solutions. People will adopt digital payment platforms when they realize they safeguard their privacy and avoid fraud and transaction errors. Post-COVID-19 studies showed that most consumers started to prefer contactless payment systems because those systems allow them to make payments without touching anything during their transactions. Younger consumers show faster adoption of digital payment platforms than older consumers because they have superior technological skills. The use of GCash mobile wallet platforms is based on the ease and security perceived by the public and their technological literacy.

The introduction of digital payment systems will change how customers purchase items from retail stores. The research studies demonstrate that businesses achieve better operational performance when they implement cashless payment systems. The research conducted by Rahman and his team in (2022) demonstrated that businesses can achieve better financial processes through cashless payment systems because these systems eliminate the requirement for manual cash handling.

The research shows that businesses which accept mobile payments boost customer satisfaction through their provision of multiple payment methods. Digital payment users favor establishments that accept mobile wallets over cash payments. Studies on the use of mobile wallets have shown that digital payment platforms reduce the amount of cash users spend in their day-to-day activities. Digital payment systems provide businesses with better financial record-keeping capabilities while also reducing the risks associated with large cash handling operations. The research results demonstrate that the usage of GCash mobile wallet platforms in sari-sari stores will result in a decrease of cash transactions which will simultaneously enhance the efficiency of retail transactions.

Table 1. Comparative Analysis of Cash and GCash Transactions

Feature	Cash Transactions	GCash Transactions	Impact on Retail Transactions
Transaction Speed	Manual counting and change needed	Instant QR/mobile payment	Faster transaction processing
Convenience	Requires physical money	Can pay using mobile phone	Faster transaction processing
Record Keeping	Manual recording	Automatic digital history	Better transaction tracking
Security	Risk of theft/loss	Protected by account verification	Improved payment security
Dependence on Internet	Not required	Requires internet/mobile signal	May affect transaction reliability
Customer Preference	Traditional method	Preferred by younger users	Encourages cashless behavior
Payment Flexibility	Limited to available cash	Supports exact payment	Reduces change-related problems

3.0. Methodology

This research utilized a descriptive quantitative research approach to examine the impact of GCash usage on cash transactions. Data were collected through a structured survey questionnaire and analyzed using statistical tools such as mean and t-test. The methodology ensured that the data gathered were reliable, valid, and relevant to the objectives of the study.

3.1. Research Design

This research was conducted by using a descriptive quantitative research approach. The study aims to describe the effect of GCash usage on cash transactions of sari-sari store retailers holistically. This helps the researchers to analyze and understand the perceptions of buyers and sellers on digital payment systems using quantitative data. This study is appropriate for descriptive research because it aims to identify patterns, relationships, and trends regarding GCash usage and transaction behavior.

3.2. Respondents of the Study

The poll was carried out on 1,000 respondents in total, 800 customers and 200 sari-sari store owners. These respondents were chosen because of their experience of GCash and cash as a means of payment in retail transactions. The research included customers and sellers thus a holistic view of the effect of GCash use in sari-sari store operations was achieved.

3.3. Sampling Method

The study utilized convenience sampling in selecting respondents. This method was used because the participants were easily accessible and had prior experience with GCash transactions. Additionally, a controlled sample size of 1,000 respondents was used, ensuring representation of both customers and sellers.

3.4. Research Instrument

This study utilizes a structured questionnaire as the research instrument, which is distributed via Google Forms. The questionnaire was divided into two main sections. The first section gathered demographic information such as age, gender and respondent type. The second portion consists of statements to measure the view of the consumers and impression of the vendors on the use of GCash on the transactions in sari-sari store.

A five-point Likert scale was used to measure the level of agreement of the respondents, where:

- 5 Strongly Agree
- 4 Agree
- 3 Neutral
- 2 Disagree
- 1 Strongly Disagree

This scaling technique allowed the researchers to quantify the perceptions of both customers and sari-sari store owners regarding the impact of GCash usage on cash transactions.

The instrument used was subjected to face and content validity tests. Reliability analysis was also conducted to assess the customer perception, seller perception, and overall impact of GCash usage.

Table 2. Reliability Analysis

Scale	Cronbach's Alpha	No. of Items
Customer Perception	0.960	15
Seller Perception	0.945	15
Overall Impact Assessment	0.960	30

3.5. Data Gathering Procedure

The researchers followed a systematic procedure in gathering the data. First, a review of related literature was conducted to support the study. Second, permission was secured to conduct the survey. Third, the questionnaire was distributed through Google Forms to both customers and sari-sari store owners.

Before answering the survey, respondents were informed about the purpose of the study and were assured that their responses would be kept confidential. The data collection process was conducted within a specified period until the required number of respondents was achieved. After data collection, the responses were organized, analyzed, and interpreted using appropriate statistical tools such as mean and t-test**.**

Table 3. Response Mode and Scoring Guide

Numerical Rating	Range	Level of Agreement	Level of Impact
5	4.21–5.00	Strongly Agree	Very High Impact
4	3.41–4.20	Agree	High Impact
3	2.61–3.40	Neutral	Moderate Impact
2	1.81–2.60	Disagree	Low Impact
1	1.00–1.80	Strongly Disagree	Very Low Impact

3.6. Ethical Considerations

The researchers ensured that all ethical standards were followed throughout the study. Participation in the survey was voluntary, and informed consent was obtained from all respondents prior to data collection. The researchers ensured confidentiality and anonymity by not collecting personally identifiable information.

Furthermore, the study complied with the Data Privacy Act of 2012, ensuring that all collected data were used solely for academic purposes and were protected from unauthorized access. The respondents were also informed that they could withdraw from the study at any time without any consequences.

4.0. Results and Discussion

This section presents and discusses the data gathered from the respondents regarding the impact of GCash usage on cash transactions in sari-sari stores. The data are presented through figures and tables, followed by corresponding interpretations to explain the findings of the study.

4.1. Profile of the Respondents

The following data show the characteristics of the respondents involved in the study on the impact of GCash usage on cash transactions in sari-sari stores.

Figure 1 presents the age distribution of the customer respondents who participated in the survey conducted by the researchers. Data show that the respondents came from different age groups, including younger individuals, middle-aged adults, and older respondents.

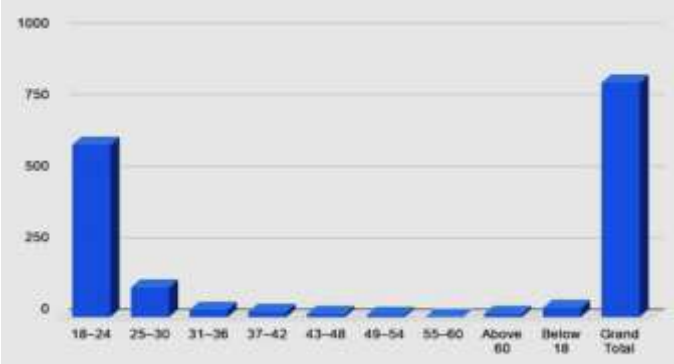

Figure 1. Distribution of Customer Respondents According to Age Group Showing Higher Participation of Young Adults in GCash Usage.

The results show that the majority of the respondents belong to the 18–24 age group, followed by those aged 25–30. A smaller number of respondents fall under the age brackets 31–36, 37–42, and above, indicating that fewer older individuals participated in the survey. This implies that younger individuals are more actively engaged in using digital payment systems such as GCash compared to older age groups.

Figure 2 presents the age distribution of the sari-sari store owner respondents who participated in the survey conducted by the researchers. Data show that the respondents came from different age groups, including early adults, middle-aged individuals, and older adults.

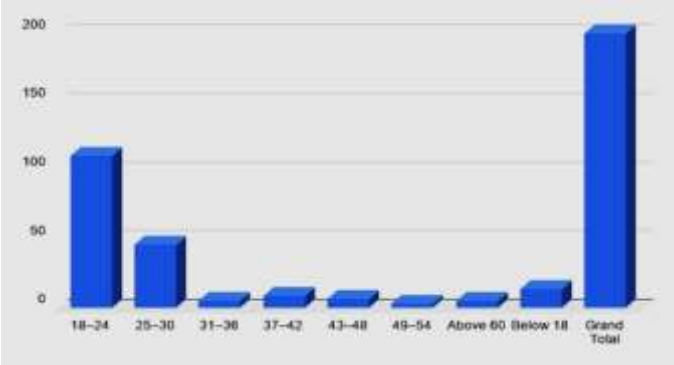

Figure 2. Distribution of Seller Respondents According to Age Group Showing Higher Participation among Young Adult Store Owners

The findings show that the majority of the respondents are in the age group of **18-24**, followed by **25-30 years**. Fewer respondents belong to the higher age brackets such as **31–36, 37–42, and above**, indicating that sari-sari store operations are more commonly managed by individuals within the younger to middle-age groups.

Figure 3 presents the gender distribution of the respondents who participated in the survey conducted by the researchers. Data show that both male and female respondents were represented in the study.

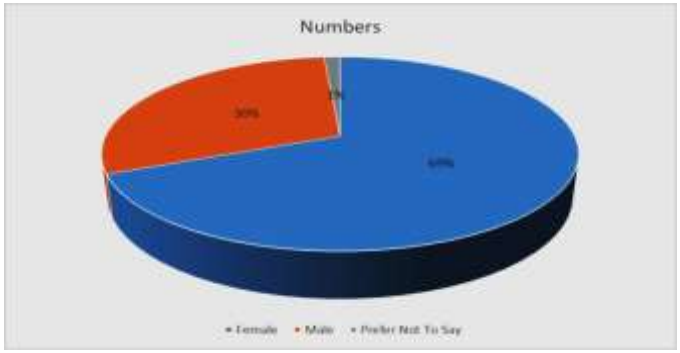

Figure 3. Gender Distribution of Respondents

The results indicate that the majority of respondents are female, while a smaller portion are male. This means that both genders have a role as customers or owners in the transaction of sari-sari stores. The findings further suggest that the use of GCash is not limited to a specific gender group and can be utilized by anyone regardless of gender. Figure 4 presents the distribution of respondents according to type who participated in the survey. The data show that the majority of respondents are customers, while the remaining are sari-sari store owners.

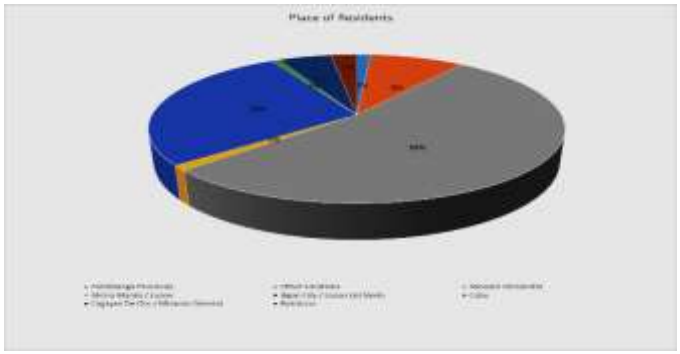

Figure 4. Distribution of Respondents According to Type

This indicates that the study captured broader perspectives regarding GCash usage among both customers and sellers.

Figure 5 presents the distribution of respondent types that participated in the survey conducted by the researchers. The data show that majority of the respondents are customers (80%) while the remaining are sari-sari store owners (20%).

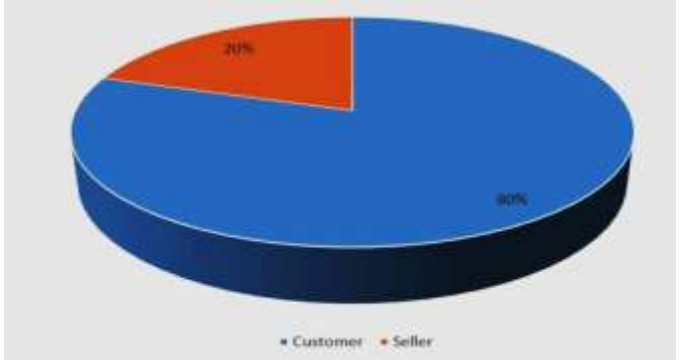

Figure 5. Percentage Distribution of Customer and Seller Respondents

This finding indicates that the study gathered broader perspectives regarding the use of GCash in sari-sari store transactions. It also highlights the important role of both customers and sellers in adoption and usage of digital payment systems.

4.2. Impact Assessment on Customer Perception

Table 4 presents the impact assessment results on the use of GCash in terms of customer perception. The data in Table 4 reveal that the overall impact of GCash usage on customers is very high, as reflected in the overall computed mean score of 4.21.

Specifically, Customers showed a high level of awareness that sari-sari stores accept GCash as a mode of payment ($\mu = 4.46$). They also strongly agreed that they find GCash to be convenient ($\mu = 4.25$) and useful, particularly when they do not have exact cash when they make a purchase ($\mu = 4.41$). Moreover, the respondents mentioned that GCash reduces the need to bring physical cash ($\mu = 4.25$) and enhances their overall buying experience ($\mu = 4.15$).

In addition, the respondents also preferred GCash to be easier to transact ($\mu = 4.17$), faster ($\mu = 4.15$) and more comfortable ($\mu = 4.19$). They also showed trust in the security of GCash ($\mu = 4.12$) and willingness to use it regularly ($\mu = 4.19$). However, some variables such as the influence of GCash on store choice ($\mu = 4.10$) and the impact of GCash on the frequency of cash usage ($\mu = 4.16$) were rated slightly lower but still high impact.

The results demonstrate that GCash has been widely accepted among customers which has increased the efficiency and customer experience of sari-sari store transactions.

Table 4. Impact Assessment on Customer Perception

Item Statements	Mean	Verbal Interpretation
Awareness of GCash Acceptance	4.46	Strongly Agree
Convenience of Using GCash	4.25	Strongly Agree
Ease of Payment Using GCash	4.17	Agree
Comfort in Using GCash	4.19	Agree
Preference for GCash over Cash	4.22	Strongly Agree
Influence of GCash on Store Choice	4.10	Agree
Reduction of Carrying Cash	4.25	Strongly Agree
Ease of Understanding GCash Transactions	4.21	Strongly Agree
Perceived Speed of GCash Transactions	4.15	Agree
Trust in GCash Security	4.12	Agree
Willingness to Use GCash Regularly	4.19	Agree
Improvement in Buying Experience	4.15	Agree

Usefulness of GCash without Exact Cash	4.41	Strongly Agree
Recommendation of GCash for Payments	4.19	Agree
Effect of GCash on Cash Usage Frequency	4.16	Agree
Grand Mean	4.21	
Verbal Interpretation	Very High Impact	

4.3. Impact Assessment on Seller Perception

Table 5 presents the impact assessment results on the use of GCash in terms of seller perception. The data in Table 5 present that the overall effect of GCash usage to sellers is high as reflected in the computed overall mean score of 4.14.

Specifically, sellers strongly agreed that customers ask if GCash payments are accepted in their stores (μ=4.28) and that GCash acceptance provides customers with an additional payment option (μ=4.23). They also acknowledge the positive impact of GCash on the store's operations (μ=4.22).

Moreover, sellers agreed that GCash improves the efficiency of transactions (μ = 4.08), allows faster payment completion (μ = 4.12), and influences customer purchasing behavior (μ = 4.13). They agreed that GCash helps to improve record-keeping (μ = 4.18) and provides more convenience to customers (μ = 4.18).

However, some challenges were also mentioned such as dependence on internet or signal availability (μ = 4.20) and managing transactions (μ = 4.16) which may affect the smooth use of GCash in daily operations. Additionally, sellers agreed that GCash reduces their need for actual cash (μ = 4.09) and reduces their difficulties in providing change (μ = 3.98).

These findings imply that GCash provides operational advantages and improves customer service, however some practical challenges are also faced by sellers in its implementation**.**

Table 5. Impact Assessment on Seller Perception

Item Statements	Mean	Verbal Interpretation
Customer Inquiry on GCash Availability	4.28	Strongly Agree
Additional Payment Option through GCash	4.23	Strongly Agree
Ease of Managing GCash Transactions	4.16	Agree
Convenience of GCash for Customers	4.18	Agree
Reduction in Handling Physical Cash	4.09	Agree
Reduction of Change-Related Problems	3.98	Agree
Improvement in Transaction Efficiency	4.08	Agree
Clarity of GCash Payment Confirmation Process	4.10	Agree

Effect of Internet/Signal on GCash Usage	4.20	Agree
Faster Completion of Payments Using GCash	4.12	Agree
Increase in Customer Purchases due to GCash	4.11	Agree
Reliability of GCash for Daily Transactions	4.10	Agree
Improvement in Record-Keeping through GCash	4.18	Agree
Influence of GCash on Customer Payment Behavior	4.13	Agree
Positive Impact of GCash on Store Operations	4.22	Strongly Agree
Grand Mean	4.14	
Verbal Interpretation	High Impact	

4.4. Overall Impact Assessment of GCash Usage

Table 6 shows the overall impact of using GCash on the respondents who were customers and sellers. The data indicates that the overall impact of GCash is high as shown by the computed mean of 4.18.

GCash plays a significant role in improving transaction efficiency, user convenience, and payment options for sari-sari stores. Customers benefit from easier payment options that may reduce their need to carry physical cash. The sellers experience this benefit through improved customer demand and quicker transaction processing and more effective record keeping. Therefore, it can be concluded that GCash has positively affected the customer behaviour and seller operations. However, the lower rating compared to the perception of customers illustrates that the sellers are experiencing some limitations, especially in the technical and operational factors. Overall, GCash has served as a catalyst for the digitalization of small retail transactions and as a useful digital payment tool in the community.

Table 6. Overall Impact Assessment

Category	**Mean**	**Verbal Interpretation**
Customer Perception	4.21	Very High Impact
Seller Perception	4.14	High Impact
Overall Impact	4.18	High Impact

Table 7. Impact of GCash Usage on Cash Transactions

Variable	**t-value**	**Df**	**sig (2-tailed)**	**Decision**
GCash Usage and its Impact on Cash Transactions	-18.245	999	0.000	Significant

Table 7 presents the statistical test used to determine whether GCash usage has a significant impact on cash transactions in retail establishments. The computed p-value of 0.000 is less than the level of significance (0.05),

indicating a statistically significant result. Thus, the null hypothesis is rejected. This suggests that GCash usage significantly influences transaction behavior and may reduce reliance on cash transactions

5.0. Conclusion and Future Recommendations

5.1. Conclusions

The results of the study show that GCash has a substantial influence on the behavior of customers and sari-sari store owners in the Philippines in retail transactions. Customers perceived GCash as convenient, efficient and accessible while merchants perceived GCash as contributing to transaction efficiency, customer service and record keeping. The results imply that GCash can lessen the dependency on physical currency transactions and encourage cashless payment behavior in retail outlets. The statistical analysis also showed a strong association between GCash usage and cash transaction dynamics. Hence, the null hypothesis was rejected. Overall, the study underlines the importance of digital financial technology in altering retail payment systems within local communities.

5.2. Future Recommendations

1. Future studies may compare GCash with other digital wallet platforms such as Maya and ShopeePay.

2. Researchers may investigate the long-term economic effects of cashless systems on small businesses.

3. Future research may include rural and remote communities to examine digital payment accessibility.

4. Additional variables such as internet reliability and cybersecurity concerns may be explored.

5. Comparative studies between urban and rural retail establishments may also be conducted.

6. Future researchers may utilize mixed-method approaches to obtain deeper qualitative insights regarding digital payment adoption.

Declaration

Source of Funding

This research received no external funding.

Competing Interests Statement

The authors declare no conflict of interest related to this study.

Consent for publication

All authors reviewed and approved the manuscript for publication.

Availability of data and material

The datasets used and analysed during the current study are available from the corresponding author upon reasonable request.

Authors' Contributions

All authors contributed equally to the conceptualization, data gathering, analysis, interpretation, and writing of this study.

Informed Consent

Informed consent was obtained from all respondents involved in the study.

Institutional Review Board Statement

Not Applicable.

Ethical Approval

The study complied with the ethical standards of academic research and the provisions of the Data Privacy Act of 2012.

Declaration of Artificial Intelligence

Artificial Intelligence tools were utilized solely for grammar checking, formatting assistance, and language refinement. All analyses, interpretations, and conclusions remain the original work of the researchers.

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